REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

New claims 16 and 17 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1, 2, and 4-17 are now pending in this application.

Rejections under 35 U.S.C. § 103

Claims 1, 2, 4, 5, 7, and 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 1,163,983 (hereafter "Peene") in view of U.S. Patent No. 4,830,647 (hereafter "Watabe"). This rejection is respectfully traversed.

Amended claim 1 recites a spool comprising two or more elongated steel elements wound in parallel and in several windings upon said spool, wherein several windings wound next to each other build a layer, wherein said two or more elongated steel elements alternate with each other in each layer, wherein the distance between two neighboring elongated steel elements, as measured along a line parallel to the axis of the spool, is not more than 10 mm along 90% of the length of each elongated steel element.

The attached Exhibit A illustrates basic definitions helpful in explaining how a spool is wound with a single element. As shown in drawing 1 of Exhibit A, a winding is formed on a spool by winding one revolution of an element around the spool. As shown in drawing 2 of Exhibit A, two revolutions of the element form two windings on the spool. A layer is formed when multiple windings of the element are wound onto the spool, as shown in drawing 3 of

Exhibit A. Multiple layers may then be formed by winding the element on the spool in zigzag fashion, as shown in drawings 4 and 5 of Exhibit A.

Peene discloses an apparatus for winding multiple strands onto a reel so that the lengths of the strands are approximately equal. See Peene at page 2, lines 51-59. However, Peene does not disclose or suggest "[a] spool comprising two or more elongated steel elements wound in parallel and in several windings upon said spool, wherein several windings wound next to each other build a layer, wherein said two or more elongated steel elements alternate with each other in each layer." The apparatus of Peene accommodates differences in thickness between elements by controlling the tension of the individual elements as they are being wound. See Peene at page 2, lines 98-121.

The apparatus of Peene causes elements to be wound in distinct and separate zones on a spool due to the control of tension for individual elements. Drawing 1 of Exhibit B illustrates an example of Peene that uses five elements 1-5 that are wound onto a spool. As shown in drawing 1 of Exhibit B, element 1 is wound in zone I, element 2 is wound in zone II, and so on. Zones I-V are separate and distinct from one another. Drawing 2 of Exhibit B illustrates an example of Applicants' invention in which two elements 1, 2 are wound on a spool to form a layer. As shown in drawing 2 of Exhibit B, elements 1, 2 are wound so that elements 1, 2 alternate with one another. This is in contrast to the apparatus of Peene, which does not alternate the elements with each other in a layer. As shown in drawing 1 of Exhibit B, the elements forming a layer are wound within individual zones so that the elements do not alternate.

Therefore, Peene fails to disclose or suggest "[a] spool comprising two or more elongated steel elements wound in parallel and in several windings upon said spool, wherein several windings wound next to each other build a layer, wherein said two or more elongated steel elements alternate with each other in each layer." Furthermore, Peene does not disclose or suggest a spool "wherein the distance between two neighboring elongated steel elements, as measured along a line parallel to the axis of the spool, is not more than 10 mm along 90% of the length of each elongated steel element."

Watabe discloses a method of winding glass yarns. See Watabe at col. 1, lines 6-11. Watabe discloses that elements are wound in a zigzag fashion to form a cake 8 with a trapezoidal cross-section. See Watabe at col. 4, lines 15-52.

It would not have been obvious to one of ordinary skill in the art to have modified the apparatus of Peene by the teachings of Watabe to make the spool of claim 1 or the method of claim 7. Peene teaches against the zigzag type of winding disclosed by Watabe because Peene discloses an apparatus for controlling the tension of individual elements so that the elements are wound in equal lengths, causing the elements to be wound in distinct zones. Therefore, it would not have been obvious to combine the teachings of Peene and Watabe because Peene and Watabe teach against one another. Nor would one of ordinary skill in the art have had motivation to make such a combination.

Applicants further submit that glass is materially different from steel. For example, drawing molten glass through orifices to manufacture glass yarns, as disclosed by Watabe, will not have the same concerns regarding tension as winding steel elements. Steel elements are solid elements with a substantial modulus (E) value. A molten glass yarn has a much lower modulus value due to its molten state, allowing the glass to elongate much more readily. Any differences in tension between molten glass strands will be absorbed by the glass material itself, minimizing the difference in tension between strands and any potential sagging of strands. Because Watabe's process uses glass, this process does not suffer from the same concerns as processes using steel elements. Therefore, it would not have been obvious to one of ordinary skill in the art to combine the teachings of Watabe with the apparatus of Peene because Watabe does not address differences in tension between elements and problems caused by such differences in tension, such as sagging.

For at least these reasons, withdrawal of the rejection is respectfully requested.

Claims 8-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Peene in view of Watabe as applied to claim 7 above, and further in view of U.S. Patent No. 2,187,841 (hereafter "Pierce"). This rejection is respectfully traversed. Pierce fails to remedy the deficiencies of Peene and Watabe. Withdrawal of this rejection is respectfully requested.

New claims 16 and 17 have been added to further distinguish the invention from the prior art.

Allowable Subject Matter

Applicants wish to thank the Office for indicating that claims 6 and 12 contain allowable subject matter.

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 7/18/06 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5426
Facsimile: (202) 672-5399

Glenn Law
Attorney for Applicant
Registration No. 34,371